

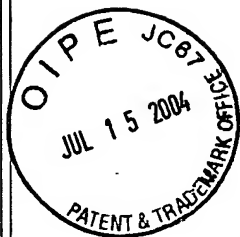
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John J. Torrente

July 13, 2004

Date of Signature

Signature



IFW

PATENT  
B429-060

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Sai P. Katikaneni and Sanjay C. Parab  
Application : 10/628,653  
For : HIGH-CAPACITY SULFUR ADSORBENT BED AND  
GAS DESULFURIZATION METHOD  
Filed : July 28, 2003  
Examiner : Unassigned  
Art Unit : 1764

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

This Supplemental Information Disclosure Statement is filed pursuant to 37 C.F.R. §1.97 and 1.98. The contents of this statement follow the outline of 37 C.F.R. §1.98(a). By this Information Disclosure Statement, applicants wish to bring the following documents to the attention of the U.S. Patent and Trademark Office.

Other Documents

AQ. Fuel Cell Hand Book, 5<sup>th</sup> Ed., U.S. Department of Energy, October 2000, pgs. 1-31 – 1-32, 5-15 – 5-17, 6-25 – 6-28, 9-9 – 9-11, 9-17 – 9-30, 9-41, 9-45 – 9-48, 9-50 – 9-52 and 9-54 – 9-56;

AR. M. Steijns, F. Derks, A. Verloop, and P. Mars, The Mechanism of the Catalytic Oxidation of Hydrogen Sulfide; Part II. Kinetics and Mechanism of Hydrogen Sulfide Oxidation Catalyzed by Sulfur, Journal of Catalysis, Vol. 42, pgs. 88- 90(1976);

AY. M. Steijns, P. Koopman, B. Nieuwenhuijse and P. Mars, The Mechanism of the Catalytic Oxidation of Hydrogen Sulfide; III. An Electron Spin Resonance Study of the Sulfur Catalyzed Oxidation of Hydrogen Sulfide, Journal of Catalysis, Vol. 42, pgs. 96-99 (1976);

AZ. G. Steinfeld, R. Sanderson, H. Ghezel-Ayagh, S. Aabens, and M. Cervi, Distillate Fuel Processing for Marine Fuel Cell Operations, AIChE Spring Meeting, Atlanta, GA, March 5-9, 2000, pgs. 2-5;

BA. S. Abens, H. Ghezel-Ayagh, G. Steinfeld, R. Sanderson, and M. Cervi, Development of a Ship Service Fuel, All Electric Ships 2000, Paris, France, Oct. 26-27, 2000, pgs. 3-5;

BB. T.J. Badosz, Virgin Activated Carbons as Sorbents of Hydrogen Sulfide, Fundamentals of Adsorption 6, Elsevier, May 1998, pgs. 635-640;

BC. T.J. Badosz and Q. Le, Evaluation of Surface Properties of Exhausted Carbons Used as H<sub>2</sub>S Adsorbents in Sewage Treatment Plants, Carbon, Vol. 36, pg. 39-40 (1998);

BD. M. Steijns and P. Mars, The Role of Sulfur Trapped in Micropores in the Catalytic Partial Oxidation of Hydrogen Sulfide with Oxygen, Journal of Catalysis, Vol. 35, pgs. 11-13 (1974);

BE. A. Bagreev, H. Rahman and T.J. Bandoz, Wood-Based Activated Carbons as Adsorbents of Hydrogen Sulfide: A Study of Adsorption and Water Regeneration Processes, Ind. Eng. Chem. Res., Vol. 39, pgs. 3849-3850, 3853-3854 (2000);

BF. A. Bagreev, H. Rahman and T.J. Bandoz, Study of H<sub>2</sub>S Adsorption and Water Regeneration of Coconut-Based Activated Carbon, Environ. Sci. Technol., Vol. 34, pg. 4587-4588 (2000);

BG. A. Turk, K. Mahmood and J. Mozaffari, Activated Carbon for Air Purification in New York City's Sewage Treatment Plants, Water Science and Technology, Vol. 27 (7-8), pgs. 121-123 (1993);

BH. A. Primavera, A. Trovarelli, P. Andreussi, and G. Dolcetti, The Effect of Water in the Low-Temperature Catalytic Oxidation of Hydrogen Sulfide to Sulfur Over Activated Carbon, Applied Catalysis A: General, Vol. 173, pgs. 185-187, 192 (1998);

BI. A. Dalai, and E. L. Tollefson, Kinetics and Reaction Mechanism of Catalytic Oxidation of Low Concentrations of Hydrogen Sulfide in Natural Gas Over Activated Carbon, The Canadian Journal of Chemical Engineering, Vol. 76, pg. 902-904, 913 (1998);

BJ. A. Bagreev, H. Rahman and T.J. Bandoz, Thermal Regeneration of a Spent Activated Carbon Previously Used as Hydrogen Sulfide Adsorbent, Carbon, Vol. 39, pgs. 1319-1320 (2001).

Enclosed are copies of the documents listed. Also, enclosed in duplicate, is an accompanying form equivalent to PTO-1449, listing these references cited by the applicants. The Examiner is respectfully requested to mark on one copy of the enclosed form that the

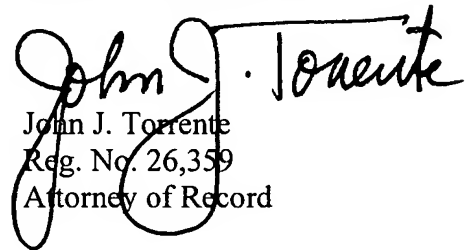
Examiner has reviewed the listed documents and return the marked copy to applicants' undersigned attorney at the below listed address.

No monetary amount is required for filing this Information Disclosure Statement under 37 C.F.R. §1.97(b) based upon the filing of the Statement prior to the issuance of the first action in this application. Please charge any fees for entry of this Statement to our Deposit Account 18-1644.

Dated: July 13, 2004

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Respectfully submitted,

  
John J. Torrente  
Reg. No. 26,359  
Attorney of Record

JUL 15 2004  
 PATENT & TRADEMARK OFFICE  
 DATE

U.S. PATENT DOCUMENTS

## FOREIGN PATENT DOCUMENTS

**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

**DATE CONSIDERED**

**SHEET 1 OF 2**

# INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Docket Number (Optional)

B429-060

Application Number

10/628,653

Applicant(s)

Sai P. Katikaneni and Sanjay C. Parab

Filing Date

July 28, 2003

Group Art Unit

1764

\*EXAMINER

INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AY.

M. Steijns, P. Koopman, B. Nieuwenhuijse and P. Mars, The Mechanism of the Catalytic Oxidation of Hydrogen Sulfide; III. An Electron Spin Resonance Study of the Sulfur Catalized Oxidation of Hydrogen Sulfide, Journal of Catalysis, Vol. 42, pgs. 96-99 (1976)

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EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.